

L4-PNRDM-30-X



LDF4-50A Jumper with interface types N Male Right Angle and 7-16
DIN Male, 9.14 m

Product Classification

| | |
|-----------------------|--------------------|
| Product Type | SureFlex® standard |
| Product Brand | HELIAX® |
| Product Series | LDF4-50A |

General Specifications

| | |
|---|------------------|
| Attachment, Connector B | Field attachment |
| Body Style, Connector A | Right angle |
| Body Style, Connector B | Straight |
| Interface, Connector A | N Male |
| Interface, Connector B | 7-16 DIN Male |
| Specification Sheet Revision Level | A |

Dimensions

| | |
|---------------------|--------------------|
| Length | 9.14 m 29.987 ft |
| Nominal Size | 1/2 in |

Electrical Specifications

| | |
|-------------------------|--------|
| DTF, Connector A | -32 dB |
|-------------------------|--------|

Jumper Assembly Sample Label

L4-PNRDM-30-X



Environmental Specifications

Immersion Test Method Meets IEC 60529:2001, IP68 in mated condition

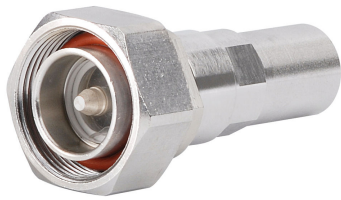
Regulatory Compliance/Certifications

| Agency | Classification |
|---------------|--|
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |

Included Products

- L4TDM-PS – 7-16 DIN Male Positive Stop™ for 1/2 in LDF4-50A cable
- L4TDM-PSA – 7-16 DIN Male Positive Stop™ for 1/2 in AL4RPV-50, LDF4-50A, HL4RPV-50 cable
- L4TNR-HC – Type N Male Right Angle for 1/2 in LDF4-50A cable
- LDF4-50A – LDF4-50A, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 1/2 in, black PE jacket Halogen free jacketing non-fire-retardant (General propose cable for outdoor use only)

L4TDM-PS



7-16 DIN Male Positive Stop™ for 1/2 in LDF4-50A cable

Product Classification

| | |
|----------------------|----------------------------------|
| Product Type | Wireless and radiating connector |
| Product Brand | HELIAX® Positive Stop™ |

General Specifications

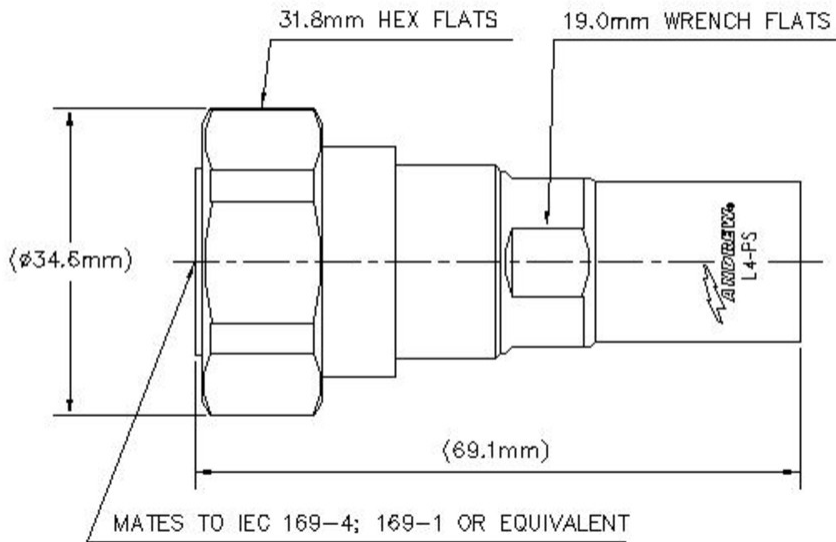
| | |
|--|---------------|
| Body Style | Straight |
| Cable Family | LDF4-50A |
| Inner Contact Attachment Method | Captivated |
| Inner Contact Plating | Silver |
| Interface | 7-16 DIN Male |
| Mounting Angle | Straight |
| Outer Contact Attachment Method | Ring-flare |
| Outer Contact Plating | Trimetal |
| Pressurizable | No |

Dimensions

| | |
|---------------------|--------------------|
| Length | 68.07 mm 2.68 in |
| Diameter | 36.07 mm 1.42 in |
| Nominal Size | 1/2 in |

Outline Drawing

L4TDM-PS



Electrical Specifications

| | |
|---|----------------------|
| 3rd Order IMD at Frequency | -120 dBm @ 910 MHz |
| 3rd Order IMD Test Method | Two +43 dBm carriers |
| Insertion Loss Coefficient, typical | 0.05 |
| Average Power at Frequency | 1.1 kW @ 900 MHz |
| Cable Impedance | 50 ohm |
| Connector Impedance | 50 ohm |
| dc Test Voltage | 4000 V |
| Inner Contact Resistance, maximum | 0.8 mOhm |
| Insulation Resistance, minimum | 5000 MOhm |
| Operating Frequency Band | 0 – 8800 MHz |
| Outer Contact Resistance, maximum | 1.5 mOhm |
| Peak Power, maximum | 40 kW |
| RF Operating Voltage, maximum (vrms) | 1415 V |
| Shielding Effectiveness | -110 dB |

VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) |
|----------------|-------|------------------|
| 45–1000 MHz | 1.023 | 38.89 |

L4TDM-PS

| | | |
|----------------------|-------|-------|
| 1010–2200 MHz | 1.029 | 36.9 |
| 2200–3000 MHz | 1.046 | 32.96 |
| 3010–4000 MHz | 1.074 | 28.95 |
| 4010–6000 MHz | 1.106 | 25.96 |
| 6010–8000 MHz | 1.152 | 23.02 |

Mechanical Specifications

| | |
|--|---|
| Attachment Durability | 25 cycles |
| Connector Retention Tensile Force | 889.64 N 200 lbf |
| Connector Retention Torque | 5.42 N-m 47.998 in lb |
| Coupling Nut Proof Torque | 25 N-m 221.269 in lb |
| Coupling Nut Retention Force | 1000 N 224.81 lbf |
| Coupling Nut Retention Force Method | MIL-C-39012C-3.25, 4.6.22 |
| Insertion Force | 200.17 N 45 lbf |
| Insertion Force Method | IEC 61169-1:15.2.4 |
| Interface Durability | 500 cycles |
| Interface Durability Method | IEC 61169-4:9.5 |
| Mechanical Shock Test Method | MIL-STD-202, Method 213, Test Condition I |

Environmental Specifications

| | |
|---|---|
| Operating Temperature | -55 °C to +85 °C (-67 °F to +185 °F) |
| Storage Temperature | -55 °C to +85 °C (-67 °F to +185 °F) |
| Attenuation, Ambient Temperature | 20 °C 68 °F |
| Average Power, Ambient Temperature | 40 °C 104 °F |
| Corrosion Test Method | MIL-STD-1344A, Method 1001.1, Test Condition A |
| Immersion Depth | 1 m |
| Immersion Test Mating | Unmated |
| Immersion Test Method | IEC 60529:2001, IP68 |
| Moisture Resistance Test Method | MIL-STD-202F, Method 106F |
| Thermal Shock Test Method | MIL-STD-202F, Method 107G, Test Condition A-1, Low Temperature -55 °C |
| Vibration Test Method | IEC 60068-2-6 |
| Water Jetting Test Mating | Unmated |
| Water Jetting Test Method | IEC 60529:2001, IP66 |

L4TDM-PS

Packaging and Weights

Weight, net 123 g | 0.271 lb

Regulatory Compliance/Certifications

| Agency | Classification |
|------------|-----------------------------------|
| CHINA-ROHS | Above maximum concentration value |
| ROHS | Compliant/Exempted |
| UK-ROHS | Compliant/Exempted |



* Footnotes

Insertion Loss Coefficient, typical 0.05√freq (GHz) (not applicable for elliptical waveguide)

Immersion Depth Immersion at specified depth for 24 hours

L4TDM-PSA



7-16 DIN Male Positive Stop™ for 1/2 in AL4RPV-50, LDF4-50A, HL4RPV-50 cable

Product Classification

| | |
|-----------------------|--------------------------------------|
| Product Type | Wireless and radiating connector |
| Product Brand | HELIAX® Positive Stop™ |
| Product Series | LDF4-50A |
| Ordering Note | CommScope® standard product (Global) |

General Specifications

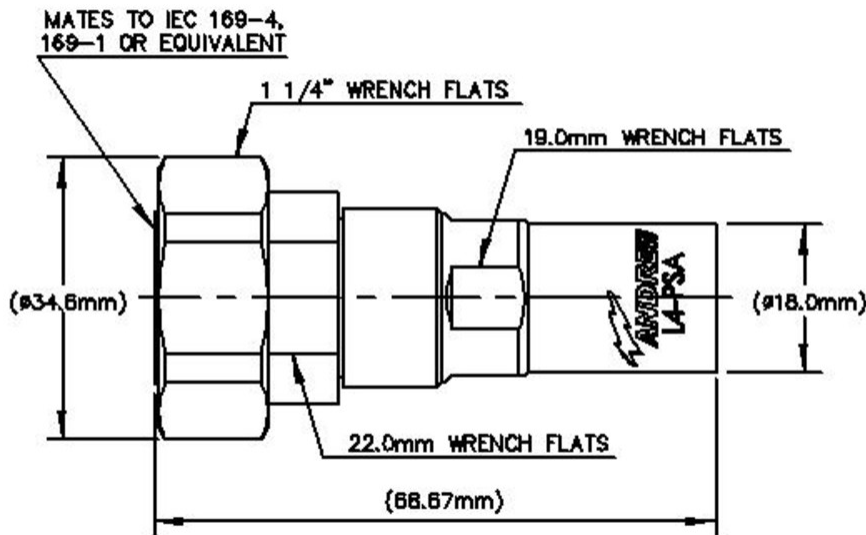
| | |
|--|--|
| Body Style | Straight |
| Cable Family | AL4-50 |
| Harmonized System (HS) Code | 85366910 (Coaxial cable and other coaxial electric conductors) |
| Inner Contact Attachment Method | Captivated |
| Inner Contact Plating | Silver |
| Interface | 7-16 DIN Male |
| Mounting Angle | Straight |
| Outer Contact Attachment Method | Ring-flare |
| Outer Contact Plating | Trimetal |

Dimensions

| | |
|---------------------|--------------------|
| Length | 68.58 mm 2.7 in |
| Diameter | 34.54 mm 1.36 in |
| Nominal Size | 1/2 in |

Outline Drawing

L4TDM-PSA



Electrical Specifications

| | |
|---|----------------------|
| 3rd Order IMD at Frequency | -120 dBm @ 910 MHz |
| 3rd Order IMD Test Method | Two +43 dBm carriers |
| Insertion Loss Coefficient, typical | 0.05 |
| Average Power at Frequency | 1.1 kW @ 900 MHz |
| Cable Impedance | 50 ohm |
| Connector Impedance | 50 ohm |
| dc Test Voltage | 4000 V |
| Inner Contact Resistance, maximum | 0.8 mOhm |
| Insulation Resistance, minimum | 5000 MOhm |
| Operating Frequency Band | 0 – 8800 MHz |
| Outer Contact Resistance, maximum | 1.5 mOhm |
| Peak Power, maximum | 40 kW |
| RF Operating Voltage, maximum (vrms) | 1415 V |
| Shielding Effectiveness | -110 dB |

VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) |
|----------------|-------|------------------|
| 45–1000 MHz | 1.023 | 38.89 |

L4TDM-PSA

| | | |
|----------------------|-------|-------|
| 1010–2200 MHz | 1.029 | 36.9 |
| 2200–3000 MHz | 1.046 | 32.96 |
| 3010–4000 MHz | 1.074 | 28.95 |
| 4010–6000 MHz | 1.106 | 25.96 |
| 6010–8000 MHz | 1.152 | 23.02 |

Mechanical Specifications

| | |
|--|---|
| Attachment Durability | 25 cycles |
| Connector Retention Tensile Force | 889.64 N 200 lbf |
| Connector Retention Torque | 5.42 N-m 47.998 in lb |
| Coupling Nut Proof Torque | 25 N-m 221.269 in lb |
| Coupling Nut Retention Force | 1000 N 224.81 lbf |
| Coupling Nut Retention Force Method | MIL-C-39012C-3.25, 4.6.22 |
| Insertion Force | 200.17 N 45 lbf |
| Insertion Force Method | IEC 61169-1:15.2.4 |
| Interface Durability | 500 cycles |
| Interface Durability Method | IEC 61169-4:9.5 |
| Mechanical Shock Test Method | MIL-STD-202, Method 213, Test Condition I |

Environmental Specifications

| | |
|--|---|
| Operating Temperature | -55 °C to +85 °C (-67 °F to +185 °F) |
| Storage Temperature | -55 °C to +85 °C (-67 °F to +185 °F) |
| Corrosion Test Method | MIL-STD-1344A, Method 1001.1, Test Condition A |
| Immersion Depth | 1 m |
| Immersion Test Mating | Unmated |
| Immersion Test Method | IEC 60529:2001, IP68 |
| Moisture Resistance Test Method | MIL-STD-202F, Method 106F |
| Thermal Shock Test Method | MIL-STD-202F, Method 107G, Test Condition A-1, Low Temperature -55 °C |
| Vibration Test Method | IEC 60068-2-6 |
| Water Jetting Test Mating | Unmated |
| Water Jetting Test Method | IEC 60529:2001, IP66 |

Packaging and Weights

L4TDM-PSA

Weight, net

120.09 g | 0.265 lb

Regulatory Compliance/Certifications

| Agency | Classification |
|---------------|--|
| CHINA-ROHS | Above maximum concentration value |
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |
| REACH-SVHC | Compliant as per SVHC revision on www.commscope.com/ProductCompliance |
| ROHS | Compliant/Exempted |
| UK-ROHS | Compliant/Exempted |



* Footnotes

Insertion Loss Coefficient, typical 0.05√freq (GHz) (not applicable for elliptical waveguide)

Immersion Depth Immersion at specified depth for 24 hours

L4TNR-HC



Type N Male Right Angle for 1/2 in LDF4-50A cable

Product Classification

| | |
|----------------------|----------------------------------|
| Product Type | Wireless and radiating connector |
| Product Brand | HELIAX® |

General Specifications

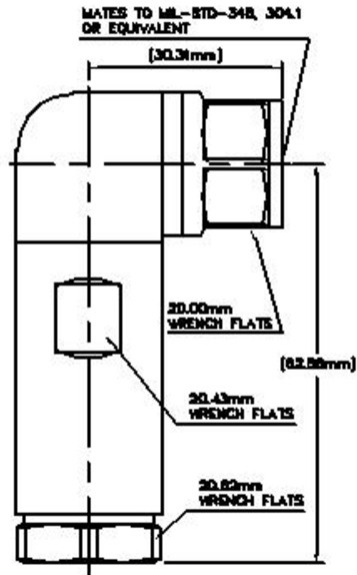
| | |
|--|-------------|
| Body Style | Right angle |
| Cable Family | LDF4-50A |
| Inner Contact Attachment Method | Captivated |
| Inner Contact Plating | Gold |
| Interface | N Male |
| Mounting Angle | Right angle |
| Outer Contact Attachment Method | Ring-flare |
| Outer Contact Plating | Trimetal |
| Pressurizable | No |

Dimensions

| | |
|---------------------------|--------------------|
| Width | 22.86 mm 0.9 in |
| Length | 73.66 mm 2.9 in |
| Right Angle Length | 41.66 mm 1.64 in |
| Diameter | 22.86 mm 0.9 in |
| Nominal Size | 1/2 in |

Outline Drawing

L4TNR-HC



Electrical Specifications

| | |
|---|------------------|
| Insertion Loss Coefficient, typical | 0.05 |
| Average Power at Frequency | 0.6 kW @ 900 MHz |
| Cable Impedance | 50 ohm |
| Connector Impedance | 50 ohm |
| dc Test Voltage | 2000 V |
| Inner Contact Resistance, maximum | 2 mOhm |
| Insulation Resistance, minimum | 5000 MOhm |
| Operating Frequency Band | 0 – 8800 MHz |
| Outer Contact Resistance, maximum | 0.3 mOhm |
| Peak Power, maximum | 10 kW |
| RF Operating Voltage, maximum (vrms) | 707 V |
| Shielding Effectiveness | -130 dB |

VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) |
|----------------|-------|------------------|
| 0–1000 MHz | 1.065 | 30.04 |
| 1000–2170 MHz | 1.119 | 25.01 |

Mechanical Specifications

L4TNR-HC

| | |
|--|---|
| Attachment Durability | 25 cycles |
| Connector Retention Tensile Force | 889.64 N 200 lbf |
| Connector Retention Torque | 5.42 N-m 47.998 in lb |
| Coupling Nut Proof Torque | 4.52 N-m 39.997 in lb |
| Coupling Nut Retention Force | 444.82 N 100 lbf |
| Coupling Nut Retention Force Method | MIL-C-39012C-3.25, 4.6.22 |
| Insertion Force | 66.72 N 15 lbf |
| Insertion Force Method | MIL-C-39012C-3.12, 4.6.9 |
| Interface Durability | 500 cycles |
| Interface Durability Method | IEC 61169-16:9.5 |
| Mechanical Shock Test Method | MIL-STD-202, Method 213, Test Condition I |

Environmental Specifications

| | |
|---|---|
| Operating Temperature | -55 °C to +85 °C (-67 °F to +185 °F) |
| Storage Temperature | -55 °C to +85 °C (-67 °F to +185 °F) |
| Attenuation, Ambient Temperature | 20 °C 68 °F |
| Average Power, Ambient Temperature | 40 °C 104 °F |
| Corrosion Test Method | MIL-STD-1344A, Method 1001.1, Test Condition A |
| Immersion Depth | 1 m |
| Immersion Test Mating | Mated |
| Immersion Test Method | IEC 60529:2001, IP68 |
| Moisture Resistance Test Method | MIL-STD-202F, Method 106F |
| Thermal Shock Test Method | MIL-STD-202F, Method 107G, Test Condition A-1, Low Temperature -55 °C |
| Vibration Test Method | IEC 60068-2-6 |
| Water Jetting Test Mating | Mated |
| Water Jetting Test Method | IEC 60529:2001, IP66 |

Packaging and Weights

| | |
|--------------------|---------------------|
| Weight, net | 204.49 g 0.451 lb |
|--------------------|---------------------|

* Footnotes

| | |
|--|---|
| Insertion Loss Coefficient, typical | 0.05√freq (GHz) (not applicable for elliptical waveguide) |
| Immersion Depth | Immersion at specified depth for 24 hours |

LDF4-50A



LDF4-50A, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 1/2 in, black PE jacket Halogen free jacketing non-fire-retardant (General propose cable for outdoor use only)

Product Classification

| | |
|-----------------------|--------------------------------------|
| Product Type | Coaxial wireless cable |
| Product Brand | HELIAX® |
| Product Series | LDF4-50A |
| Ordering Note | CommScope® standard product (Global) |

General Specifications

| | |
|-------------------------|--|
| Product Number | 520094002/00 SZ520094902/00 |
| Flexibility | Standard |
| Jacket Color | Black |
| Performance Note | Attenuation values typical, guaranteed within 5% |

Dimensions

| | |
|---------------------------------|----------------------|
| Diameter Over Dielectric | 12.954 mm 0.51 in |
| Diameter Over Jacket | 15.875 mm 0.625 in |
| Inner Conductor OD | 4.826 mm 0.19 in |
| Outer Conductor OD | 13.97 mm 0.55 in |
| Nominal Size | 1/2 in |

Electrical Specifications

| | |
|---------------------------------------|-------------------------------|
| Cable Impedance | 50 ohm ±1 ohm |
| Capacitance | 75.8 pF/m 23.104 pF/ft |
| dc Resistance, Inner Conductor | 1.48 ohms/km 0.451 ohms/kft |
| dc Resistance, Outer Conductor | 2.69 ohms/km 0.82 ohms/kft |
| dc Test Voltage | 4000 V |

LDF4-50A

| | |
|--|-----------------------------------|
| Inductance | 0.19 μ H/m 0.058 μ H/ft |
| Insulation Resistance | 100000 MOhms-km |
| Jacket Spark Test Voltage (rms) | 8000 V |
| Operating Frequency Band | 1 – 8800 MHz |
| Peak Power | 40 kW |
| Velocity | 88 % |

VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) |
|-----------------------|-------------|-------------------------|
| 680–800 MHz | 1.13 | 24.3 |
| 800–960 MHz | 1.13 | 24.3 |
| 1700–2200 MHz | 1.13 | 24.3 |
| 2300–2700 MHz | 1.13 | 24.3 |

Attenuation

| Frequency (MHz) | Attenuation (dB/100 m) | Attenuation (dB/100 ft) | Average Power (kW) |
|------------------------|-------------------------------|--------------------------------|---------------------------|
| 1.0 | 0.211 | 0.064 | 36.11 |
| 1.5 | 0.259 | 0.079 | 29.46 |
| 2.0 | 0.299 | 0.091 | 25.5 |
| 10.0 | 0.672 | 0.205 | 11.35 |
| 20.0 | 0.954 | 0.291 | 7.99 |
| 30.0 | 1.172 | 0.357 | 6.51 |
| 50.0 | 1.521 | 0.463 | 5.02 |
| 85.0 | 1.995 | 0.608 | 3.82 |
| 88.0 | 2.031 | 0.619 | 3.76 |
| 100.0 | 2.169 | 0.661 | 3.52 |
| 108.0 | 2.256 | 0.688 | 3.38 |
| 150.0 | 2.673 | 0.815 | 2.85 |
| 174.0 | 2.887 | 0.88 | 2.64 |
| 200.0 | 3.103 | 0.946 | 2.46 |
| 204.0 | 3.135 | 0.956 | 2.43 |
| 300.0 | 3.835 | 1.169 | 1.99 |
| 400.0 | 4.462 | 1.36 | 1.71 |
| 450.0 | 4.749 | 1.447 | 1.61 |
| 460.0 | 4.804 | 1.464 | 1.59 |

LDF4-50A

| | | | |
|---------------|--------|-------|------|
| 500.0 | 5.021 | 1.53 | 1.52 |
| 512.0 | 5.085 | 1.55 | 1.5 |
| 600.0 | 5.533 | 1.686 | 1.38 |
| 700.0 | 6.009 | 1.831 | 1.27 |
| 800.0 | 6.456 | 1.968 | 1.18 |
| 824.0 | 6.56 | 1.999 | 1.16 |
| 894.0 | 6.855 | 2.089 | 1.11 |
| 960.0 | 7.124 | 2.171 | 1.07 |
| 1000.0 | 7.284 | 2.22 | 1.05 |
| 1218.0 | 8.11 | 2.472 | 0.94 |
| 1250.0 | 8.226 | 2.507 | 0.93 |
| 1500.0 | 9.093 | 2.771 | 0.84 |
| 1700.0 | 9.744 | 2.97 | 0.78 |
| 1794.0 | 10.039 | 3.06 | 0.76 |
| 1800.0 | 10.058 | 3.066 | 0.76 |
| 2000.0 | 10.666 | 3.251 | 0.72 |
| 2100.0 | 10.961 | 3.341 | 0.7 |
| 2200.0 | 11.251 | 3.429 | 0.68 |
| 2300.0 | 11.535 | 3.516 | 0.66 |
| 2500.0 | 12.09 | 3.685 | 0.63 |
| 2700.0 | 12.627 | 3.849 | 0.6 |
| 3000.0 | 13.407 | 4.086 | 0.57 |
| 3400.0 | 14.401 | 4.389 | 0.53 |
| 3600.0 | 14.882 | 4.536 | 0.51 |
| 3700.0 | 15.118 | 4.608 | 0.5 |
| 3800.0 | 15.353 | 4.679 | 0.5 |
| 3900.0 | 15.585 | 4.75 | 0.49 |
| 4000.0 | 15.815 | 4.82 | 0.48 |
| 4100.0 | 16.042 | 4.889 | 0.48 |
| 4200.0 | 16.268 | 4.958 | 0.47 |
| 4300.0 | 16.492 | 5.027 | 0.46 |
| 4400.0 | 16.714 | 5.094 | 0.46 |
| 4500.0 | 16.934 | 5.161 | 0.45 |
| 4600.0 | 17.153 | 5.228 | 0.44 |
| 4700.0 | 17.37 | 5.294 | 0.44 |

LDF4-50A

| | | | |
|---------------|--------|-------|------|
| 4800.0 | 17.585 | 5.36 | 0.43 |
| 4900.0 | 17.798 | 5.425 | 0.43 |
| 5000.0 | 18.01 | 5.489 | 0.42 |
| 6000.0 | 20.055 | 6.113 | 0.38 |
| 8000.0 | 23.826 | 7.262 | 0.32 |
| 8800.0 | 25.244 | 7.694 | 0.3 |

Material Specifications

| | |
|---------------------------------|---------------------------|
| Dielectric Material | Foam PE |
| Jacket Material | PE |
| Inner Conductor Material | Copper-clad aluminum wire |
| Outer Conductor Material | Corrugated copper |

Mechanical Specifications

| | |
|--|-------------------------|
| Minimum Bend Radius, multiple Bends | 127 mm 5 in |
| Minimum Bend Radius, single Bend | 50.8 mm 2 in |
| Number of Bends, minimum | 15 |
| Number of Bends, typical | 50 |
| Tensile Strength | 113 kg 249.122 lb |
| Bending Moment | 3.8 N-m 33.633 in lb |
| Flat Plate Crush Strength | 2 kg/mm 111.995 lb/in |

Environmental Specifications

| | |
|---|--------------------------------------|
| Installation temperature | -40 °C to +60 °C (-40 °F to +140 °F) |
| Operating Temperature | -55 °C to +85 °C (-67 °F to +185 °F) |
| Storage Temperature | -70 °C to +85 °C (-94 °F to +185 °F) |
| Attenuation, Ambient Temperature | 68 °F 20 °C |
| Average Power, Ambient Temperature | 104 °F 40 °C |
| Average Power, Inner Conductor Temperature | 212 °F 100 °C |

Packaging and Weights

| | |
|---------------------|-------------------------|
| Cable weight | 0.22 kg/m 0.148 lb/ft |
|---------------------|-------------------------|

Regulatory Compliance/Certifications

LDF4-50A

Agency

CENELEC

CHINA-ROHS

ISO 9001:2015

REACH-SVHC

ROHS

UK-ROHS

Classification

EN 50575 compliant, Declaration of Performance (DoP) available

Below maximum concentration value

Designed, manufactured and/or distributed under this quality management system

Compliant as per SVHC revision on www.commscope.com/ProductCompliance

Compliant

Compliant

